N° 18,979 A.D. 1914

(*Under International Convention.*)

Date claimed for Patent under Patents and Designs Act, 1907, being date of first Foreign Application (in the United States), 23rd Jan., 1914

Date of Application (in the United Kingdom), 22nd Aug., 1914

At the expiration of twelve months from the date of the first Foreign Application, the provision of Section 91 (3) (a) of the Patents and Designs Act, 1907, as to inspection of Specification, became operative

Accepted, 3rd June, 1915

COMPLETE SPECIFICATION.

Typewriting Machine Frame.

We, THERON LORENZO KNAPP, Mechanician, 217, Jefferson Street, City of Woodstock, County of McHenry, State of Illinois, United States of America, and CLAYTON CARPENTER HARTING, Mechanician, 314, Tyron Street, City of Woodstock, in the County of McHenry, State of Illinois, United States of America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in typewriting machines, and has reference more especially to the construction of the frame or base of the machine and means for supporting or sustaining the several main operative parts of the machine on such frame or base.

The features constituting the present invention are shown in connection with a typewriting machine of that kind known as an "Oliver" typewriter, but the improvements herein described and claimed are applicable to machines differing in details of construction from such "Oliver" machine.

The invention consists in a typewriting machine having substantially horizontal key levers and a machine base comprising side and front walls and a horizontal top wall made integral with the side walls, said top wall extending between the rear parts of the side walls and over the rear parts of the key levers and a frame plate extending transversely between the side walls at a distance below the upper margins of the latter and at a distance rearwardly of the front wall, said frame plate being secured at its ends to the side walls and affording supports or bearings for the operative parts of the machine located beneath the key levers.

The invention also consists in the further features for the construction of typewriting machine frames as hereinafter described.

In the accompanying drawings:—

Figure 1 is a view in central, vertical, longitudinal section of the front or forward part of a typewriting machine frame embodying our invention;

Figure 2 is a view in front elevation of the parts shown in Figure 1;

[*Price* 6*d.*]

Typewriting Machine Frame.

Figure 3 is a plan view of the same with the operative parts above the base-plate and type-bars removed, showing the type-bar supporting standards in plan view and the type-bar links in section;

Figure 4 is a bottom view of the parts shown in Figures 1 and 2;

Figure 5 is a detail view, in side elevation, of one of the type-bar supporting standards;

Figures 6 and 7 are detail sectional views taken on lines 6—6 and 7—7 respectively of Figure 5.

The main part or base of the machine frame comprises a horizontal, elevated top wall A, side walls A^1, A^1, and rear wall A^3, made integral with and depending from the side margins of the top-plate A, and a front wall A^2, extending transversely of the front of the machine and made integral with the forward ends of the side walls A^1, A^1. The top wall A extends between the rear parts of the side walls A^1, A^1, and the forward parts of said side walls are extended forward of the front edge of said top-plate. The upper margins of the forward parts of the side walls are provided with inwardly extending, horizontal flanges *a*, *a* which form forward extensions of the side portions of the horizontal top wall A, while the front wall A^2 is provided with a rearwardly extending, horizontal flange a^1 at its upper margin, connected at its ends with the flanges *a*, *a* of the side walls. Within the space formed between the forward margin of the horizontal top wall A and the flanges *a*, a^1 of the side and front walls, is located the upturned or key-bearing ends B, B of the key-levers C, C. The top-plate A extends over the rear parts of said key-levers and supports the paper carriage and other operative parts of the machine that are located above the key-levers.

At the rear part of the top wall A are flanges a^4 from which depend brackets a^3. Between these brackets extend a pivoted rod *b* upon which the key levers B are journalled. Each key lever is maintained in its normal position by a spring *c* having one end connected to said lever and the other to a bar *d* supported in a frame *e* attached in a manner not shown to the top wall A. Bosses *f* on the side walls A^1 form standards upon the lower end of which are placed rubber feet to support the rear end of the machine.

The two sets of type-bars of the machine are mounted on type-bar standards D, D which are secured to the elevated horizontal top-plate A of the frame or base, near the forward edge of said plate. The upright links B^1, B^1, which connect the key-levers C, C with the type-bars, are located in two groups at the inner and forward faces of the type-bar standards D, D. Parts of the machine are shown in the drawings, including the carriage rack-bar E^1; the shift-frame F; the forward carriage-bar F^1 on said frame; the escape-wheel shaft M, provided with a gear-pinion M^1 which engages the carriage rack-bar E^1; a bracket F^2 on the shift-frame, in which said shaft is mounted; shift-levers G, G^1 for actuating the shift-frame, which act on a transverse rock-shaft H, provided with upwardly extending crank arms H^1; the universal bar K, which is rigidly connected with a transverse, horizontal rock-shaft K^1, located beneath the forward ends of the key-levers; the space key L, which is located above the top flange a^1 of the front wall A^2; and space-key levers L^1, L^1, that are connected with one of the arms of the universal bar by a link *l*.

The machine shown is provided with devices such as have heretofore been employed upon the "Oliver" typewriting machine, to wit, a column stop or tabulating device embracing a tabulator key-lever N, which is mounted on, and extends forwardly from, the arm or bracket F^2, and is connected with the upper end of the escape-wheel shaft M, a right-hand marginal release device, embracing a key-lever O mounted on the bracket F^2 at one side of the tabulator key-lever N, and extending forwardly substantially parallel with said tabulator key-lever, said key-levers N and O being provided at their forward ends with keys *n*, *o*, and a ribbon-throw device, the base plate P of which is supported in front of the paper carriage, by means of an upright standard P^1 on the bracket F^2.

Typewriting Machine Frame.

The parts of the machine frame, by which are supported the operative parts located beneath the forward ends of the key-levers, embrace features of construction as follows: A horizontal frame plate or bar Q extends across the forward part of the frame beneath the key-levers and at a distance below the upper margins of the forward parts of the side walls A^1, A^1 of the base frame. The inwardly projecting parts *a*, *a* of the said walls are provided upon their lower surfaces with downwardly facing shoulders a^2 against which the ends of the said frame plate Q are secured by means of screws *q*, *q*.

The frame plate Q is located with its forward edge at some distance from the front wall A^2 of the base frame, so as to leave an open space between the said frame plate and the front of the machine frame beneath the forward ends of the key-levers. A slotted guide plate Q^1 for the several key-levers is arranged vertically above the rear margin of, and is supported upon, the said frame plate Q. As shown, said guide plate is made of sheet metal and has at its lower edge a rearwardly bent flange which is fastened by screws to the frame plate.

The said frame plate Q (Figure 4) is provided at its rear edge, near its ends, with integral, rearwardly extending, bracket arms Q^2, Q^2. Said bracket arms are employed to afford pivotal support for the rock-shaft K^1 of the universal bar, and for two transverse rock-shafts G^2, G^3, which are operated by the shift levers G, G^1. Said frame plate also carries, at its ends, two integral, depending projections or hubs Q^4, Q^4, to the lower ends of which are secured rubber discs or cushions Q^5, Q^5, by which the forward part of the machine is sustained from the supporting surface on which the machine rests.

The making of the frame plate Q separate from the main part of the machine base, and securing it thereto in the position described, has the principal advantage of providing support for the operative parts beneath the forward ends of the key-levers, without the employment of the horizontal part of the base frame extending beneath the key-levers (as in the "Oliver" machine as heretofore made), so that an open space is afforded beneath the forward ends of the key-levers on which the keys are mounted, through which may fall any dust or dirt such as is liable to accumulate beneath the front parts of the key-levers in case there is a surface there located on which the same may be deposited. Such a surface located beneath the key-levers is difficult to reach for cleaning, while in the present construction the space beneath the key-levers is entirely open, forward of the frame bar Q, while the top of said frame bar may be easily reached through the space provided between its forward edge and front wall of the machine base. The use of the frame bar Q, made as described, also greatly facilitates the construction of the machine, because the bearing brackets or arms described, as well as the hubs which carry the elastic feet, may be easily cast thereon or made integral therewith.

Another feature of my improvement relates to the construction of the type-bar supporting standards D. Said standards, as illustrated, have the form of angle bars having each a flat part *d* which extends in a direction from the front to the rear of the machine and a transverse part d^1 extending from the part *d* inwardly or toward the centre of the machine. Each of the standards is provided with an integral base plate D^1 at its lower end which forms a rearwardly extending foot D^2 and an outwardly extending, rigid arm D^3, which extends from the standard laterally and outwardly over the top-plate A. Said base plate D^1 rests upon an elevated seat A^4 formed on the top-plate A to receive the same to which it is secured by the screws and steady pins at D^2 and D^3. A vertical, transversely extending rib D^4 extends outwardly from the front margin of the vertical part *d* of the standard, and is connected integrally with the front margin of the arm D^3. The outer end of the said arm D^3 is connected with the base plate by adjusting means affording rigid, but vertically adjustable, connection of the arm with the base-plate. As shown (Figures 5 and 6), such adjustable attaching means consists of a screw d^3 inserted through the arm and entering the top-plate A, and a second screw d^4 inserted vertically

through said arm and having screw-threaded engagement therewith and bearing at its lower end against the top of said plate A. By adjustment of the screw d^3 the outer end of the said arm may be raised to throw the upper ends of the standard in a lateral direction or inwardly and outwardly, and when the standard has been so adjusted it may be firmly held in position by tightening the screw d^3.

Horizontal adjustment of the upper ends of the two standards by the adjusting device described, enables each of the two groups of type-bars supported by the standards to be adjusted accurately in position with respect to the striking point of the type.

A cover or shield S is provided for protecting from dust and dirt the operative parts at the centre of the machine and forward of the paper carriage, embracing features of construction as follows: Said cover or shield S extends at its base across the frame of the machine forward of the type-bar standards D, D. The base portion S^1 of said shield is substantially horizontal and is arranged to overlap, at the rear margins of its end portions, the forward margins of the horizontal top-plate A, to which it is secured by means of two screw bolts *s*, *s*. At the forward parts of its end margins said base portion S^1 is provided with depending flanges s^1, s^1, which extend downwardly inside of and fit against the inner margins of the inturned flanges *a* of the side walls A^1 of the base. Said shield also embraces a rear part S^2 which rises from the base portion S^1 and is shaped at its ends to conform to the inclination of the standards D, D, and at its margins is bent or directed rearwardly so as to come in contact with the front faces of the front stiffening flanges D^4 of the standard D. In said upwardly extending part S^2 of the shield are formed two upright slots s^3, s^3, through which pass the tubulator and marginal release levers N and O; the keys on said levers being located forward of the shield. Said upwardly extending part of the shield rises to a point above the gear-pinion on the escape-wheel shaft but terminates below the base of the ribbon-throw device, and has a rearwardly extending horizontal top portion S^3 which projects rearwardly over the parts below the ribbon-throw device. Said horizontal top portion S^3 of the shield is provided with two forwardly extending notches s^4, s^5, one to receive the standard which supports the ribbon-throw device and the other the upright link by which said ribbon-throw device is operated.

The shield, arranged as described, serves not only to protect the parts concerned in the release of the paper carriage from the letter-spacing mechanism, from dust and dirt, but also serves to give a neat appearance to the front part of the machine above and at the rear of the keys.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A typewriting machine having substantially horizontal key levers and a machine base comprising side and front walls and a horizontal top wall made integral with the side walls, said top wall extending between the rear parts of the side walls and over the rear parts of the key levers and a frame plate extending transversely between the side walls at a distance below the upper margins of the latter and at a distance rearwardly of the front wall, said frame plate being secured at its ends to the side walls and affording supports or bearings for the operative parts of the machine located beneath the key levers, substantially as described.

2. A typewriting machine according to Claim 1 wherein the frame plate is arranged substantially horizontal and is located beneath the forward ends of the key levers.

3. A typewriting machine according to Claim 1 in which the parts in the side walls forward of the top wall and also the front wall are provided at their upper margins with inwardly extending flanges forming an open space in which the forward ends of the key levers are situated, substantially as described.

4. A typewriting machine according to Claim 1 in which the side walls are provided with downwardly facing shoulders to which the horizontal frame member is secured and in which a slotted guide plate for the key levers is attached at its lower edge to and rises from said frame member, substantially as described.

5. A typewriting machine having a machine frame to which are secured two type bar supporting standards, each of said standards being provided at its base with an integral laterally extending arm and means adjustably connecting said arms with the machine frame affording vertical adjustment of the outer ends of said arms relative to the top plate and horizontal adjustment of the upper ends of said standards toward or away from each other, substantially as described.

6. A typewriting machine according to Claim 5 in which the adjustable connecting means comprise an adjusting screw passing through the laterally extending arm and having screw threaded engagement with the top plate and a second adjusting screw which has screw threaded engagement with the said arm and abuts against the top plate, substantially as described.

7. A typewriting machine according to Claims 5 and 6 in which the standards rest upon elevated seats formed on the horizontal surface of the machine frame, while the adjusting screws engage with and abut against the said frame adjacent this elevated seat, substantially as described.

8. A typewriting machine according to Claim 1 having a shield extending across the machine base above the substantially horizontal key levers and forward of the type standards attached to said base, said shield being secured to said base and extending rearwardly and upwardly from its edge to said standards and having a part extending centrally of said standards, the shield being slotted or apertured as desired for operative parts of the machine, substantially as described.

9. A typewriting machine having a machine frame constructed substantially as and for the purposes described with reference to the accompanying drawings.

10. A typewriting machine frame having type standards secured to the machine frame substantially as and in the manner described with reference to the accompanying drawings.

Dated this 21st day of August, 1914.

MARKS & CLERK.

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A.D. 1914, Aug. 22. N° 18,979.
KNAPP & another's Complete Specification.

(3 SHEETS)
SHEET 1.

Fig.1.

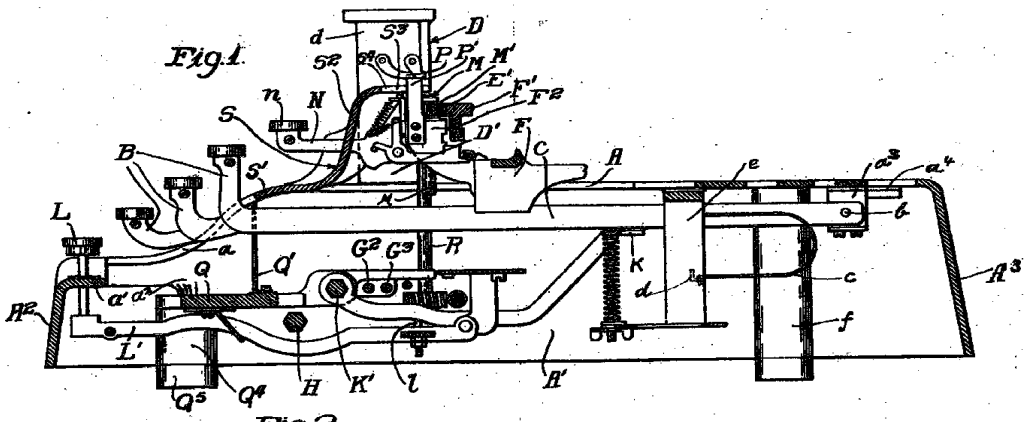


Fig.2.

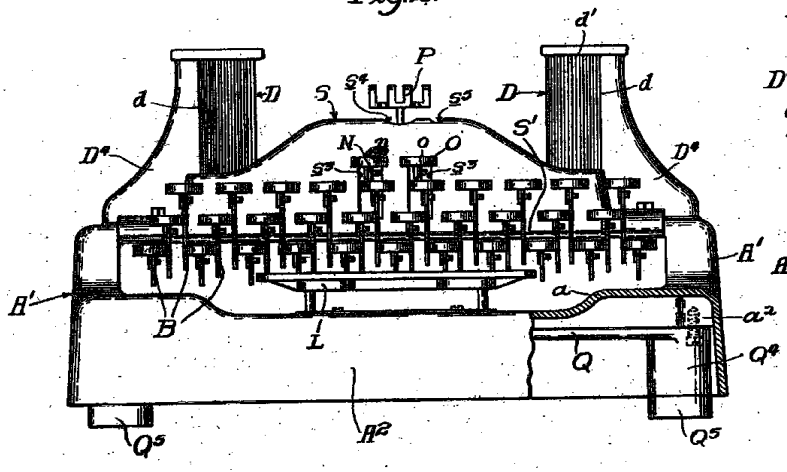


Fig.5.

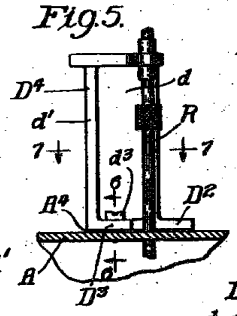


Fig.6.

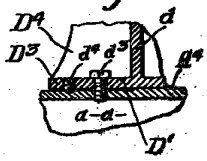


Fig.7.

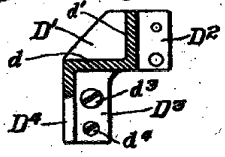


Fig. 1.

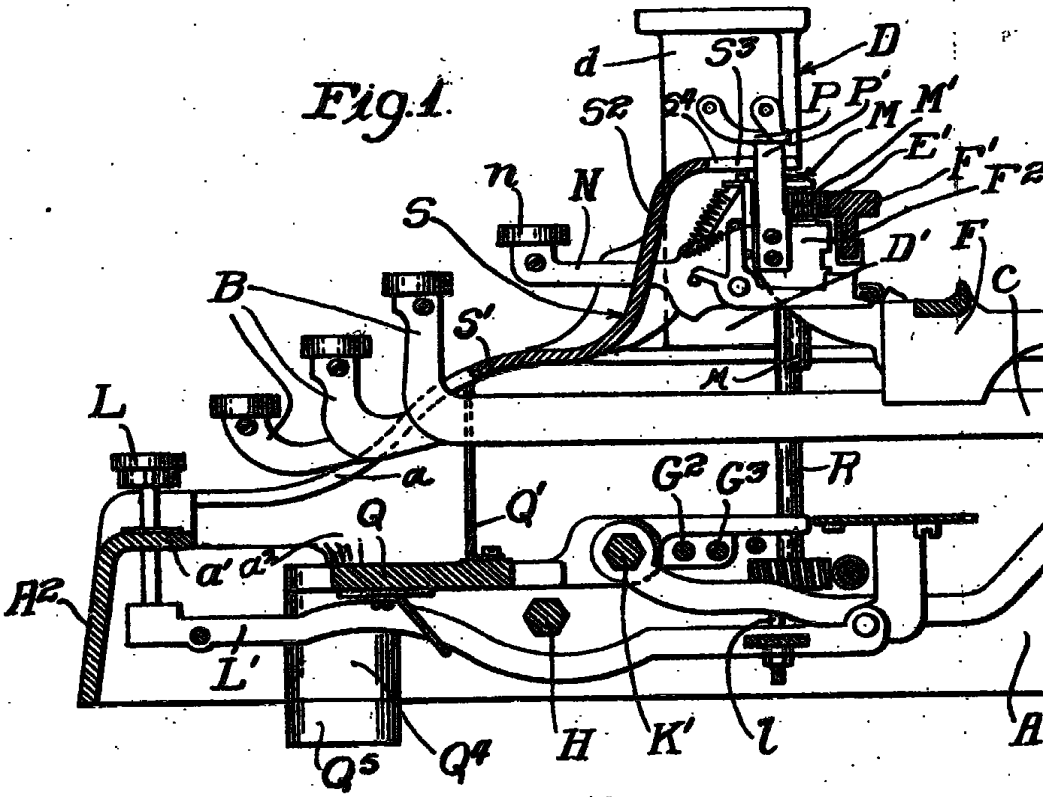
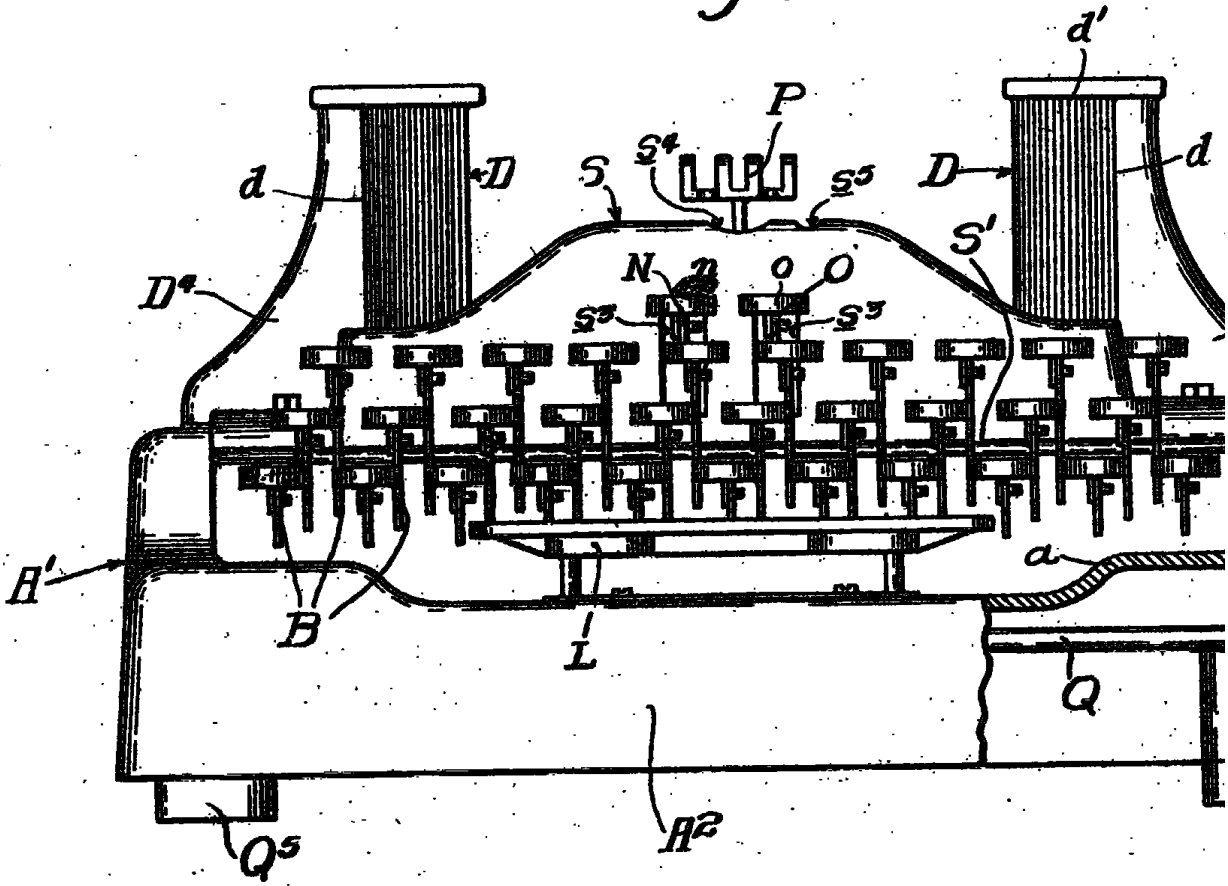


Fig. 2.



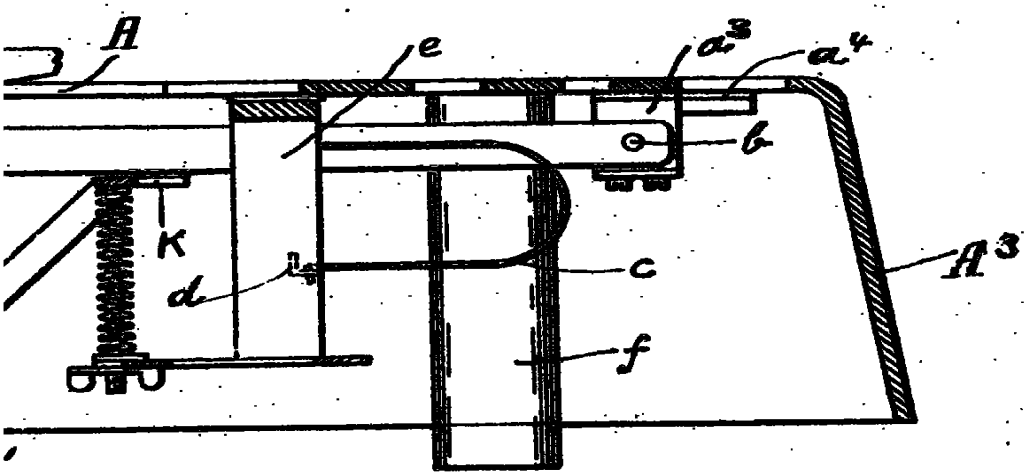


Fig.5.

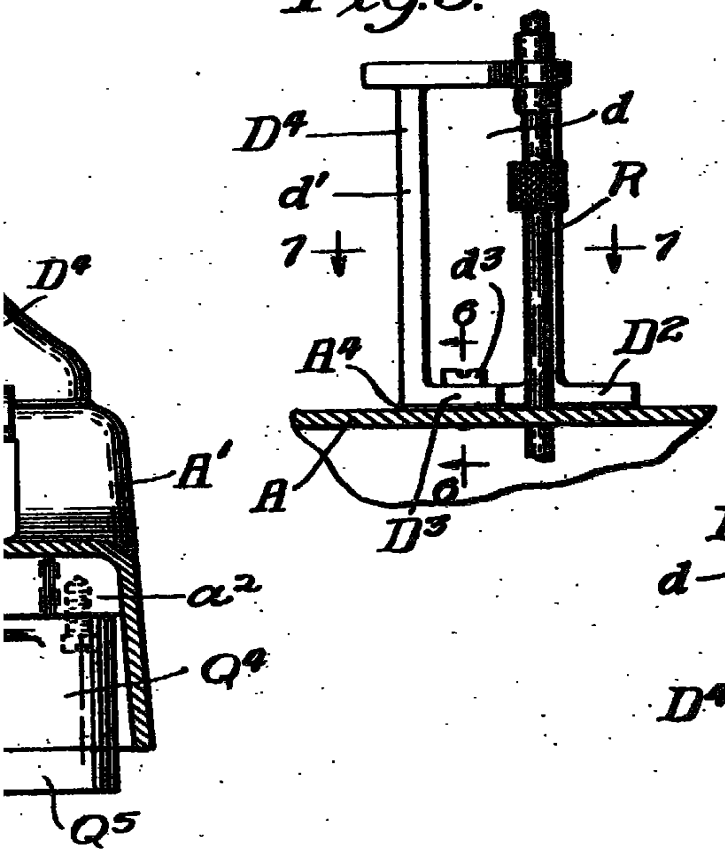


Fig.6.

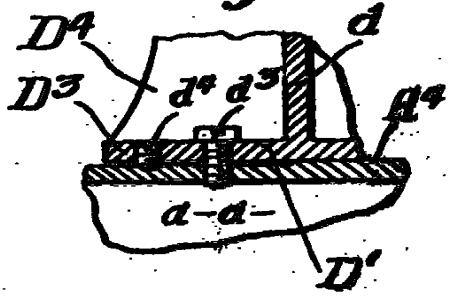
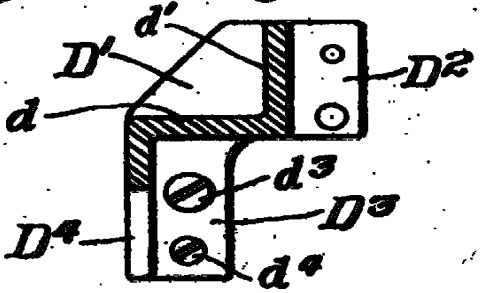


Fig.7.



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KNAPP & another's Complete Specification.

(3 Sheets)

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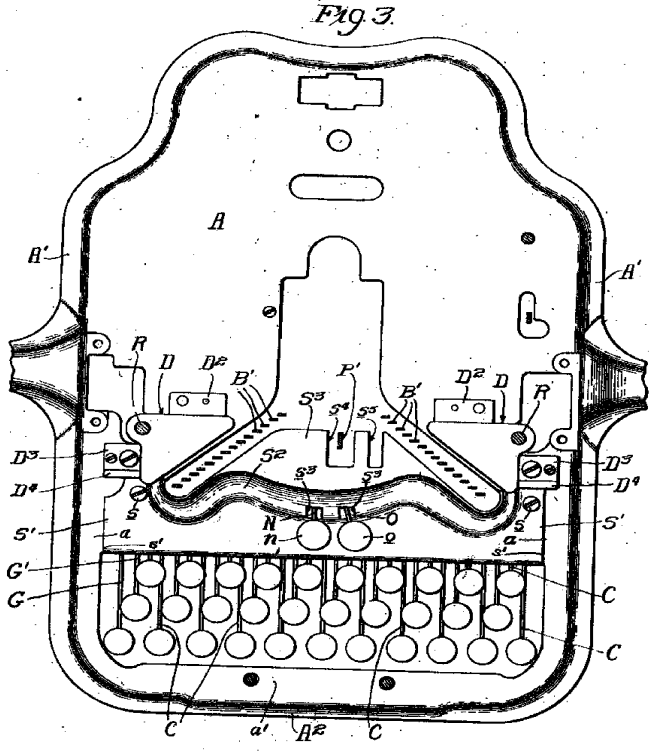
Sheet 2.

Fig. 3.



Sheet 3.

Fig. 4.

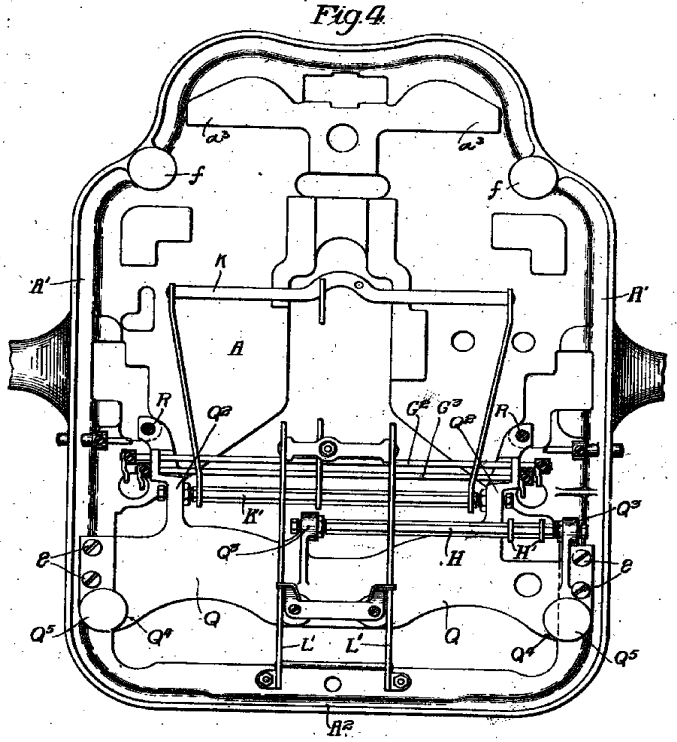


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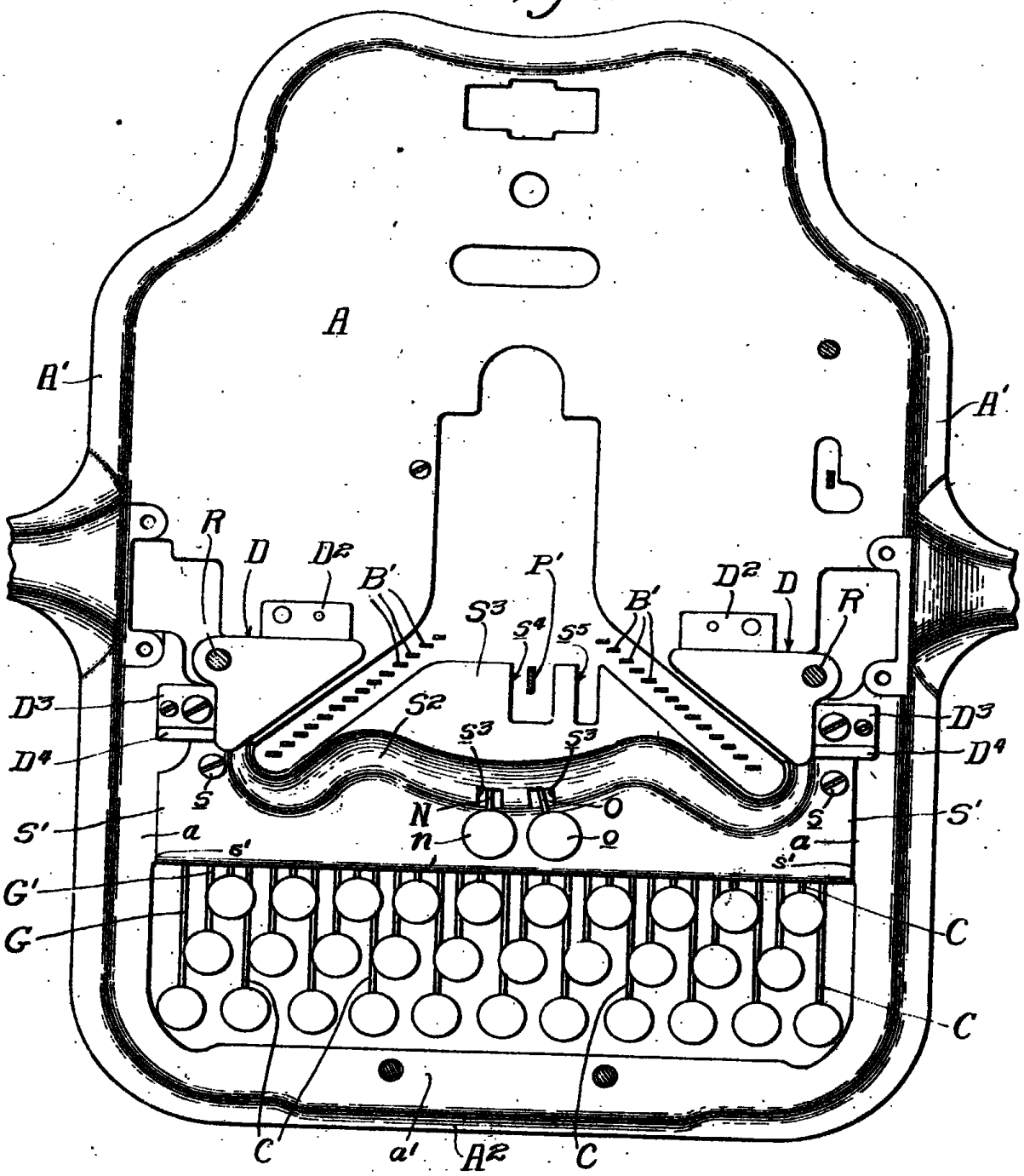
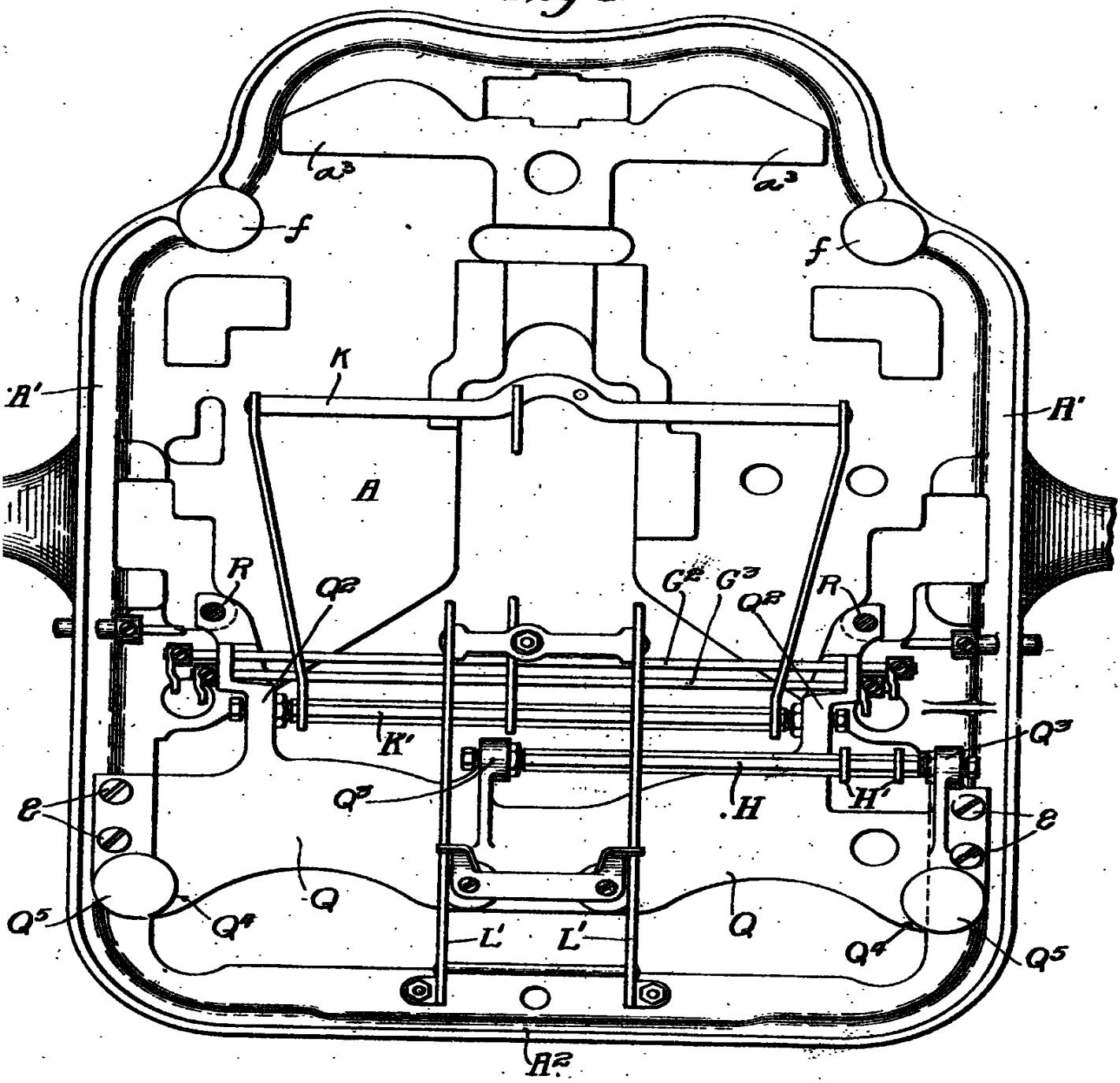
Fig. 3.



[This Drawing is a reproduction of the Original on a reduced scale.]

Fig 4.



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